

Installation Guide for Contineo 3.0

Sebastian Stein

Michael Scholz

Marco Meschieri

Alessandro Gasparini

Contents

1 Overview

This guide describes in detail the installation process of the document management system Contineo. If this is the first time you install Contineo, follow the instructions provided in section 2. If you want to upgrade from a previous version, follow the instructions in section 3.

2 Installation

2.1 Server and Database

Contineo is not an application able to run on its own. Instead, it requires a Java application server supporting the servlet specification 2.3 or higher. Contineo's developers recommend to use Apache Tomcat¹, a reliable OpenSource servlet container. See the installation instructions of the application server package for information on how to set it up.

Contineo 3 is meant to be used with Apache Tomcat version 6 and SUN's Java JRE version 6. If you want to use Contineo 3 on Apache Tomcat 5 see section 2.4.3 on page 6 for more details. Make sure to not mix the main releases of Apache Tomcat and SUN's Java JRE. If you are using Apache Tomcat 5.5, you also have to use SUN's Java JRE version 5 or if you are using Apache Tomcat 6, you also have to use SUN's Java JRE version 6.

In addition you need a database management system. Contineo supports the following systems:

- Oracle 8i/9i
- MS SQL Server 2000
- MySQL since 4.1
- HSQLDB since 1.8
- PostgreSQL since 8.0

Contineo is shipped with HSQLDB. This is a very simple database management system. It stores the database directly as SQL commands on the local file system. It is a good way to start, because it makes the installation far more easier. However, it is not recommended to use this database management system for any real world purpose. If you plan to use Contineo in any production setting, you should install a real database management system instead.

2.2 Deployment

The actual installation of Contineo starts with the deployment of Contineo in your

¹<http://jarkarta.apache.org/tomcat/>

application server. To do that you have to download the binary package of Contineo from the homepage. The binary package includes a file called *Contineo.war*. This file contains all files needed to run Contineo. If you are using Apache Tomcat, you should copy this file to the *webapps* directory and restart the server. If you are using another server, follow the deployment instructions provided. After deployment you should be able to access Contineo's setup by pointing your web browser to the following URL: <http://localhost:8080/contineo/setup/>.

2.3 Setup

Setting up Contineo is easy, because a wizard will guide you through the complete setup process. Before you can start the setup wizard, you have to provide a login. This login is necessary so that later not every user can run the setup procedure. The necessary user account can't be configured in Contineo, but it must be done in your server like Apache Tomcat. The user must have the *admin* role. See the documentation of your server how to add such an user account. For Apache Tomcat, you have to alter the file *conf/tomcat-users.xml*. First, you have to add a new role *admin*. You can do that by adding the following line to the file:

```
<role rolename="admin"/>
```

Now, you have to create an user with the role assigned. In the following example an user *admin* with the password *secret* and the roles *admin* and *manager* is created:

```
<user username="admin" password="secret"
roles="manager,admin"/>
```

In the end, your *tomcat-users.xml* file should look like:

```
<?xml version='1.0' encoding='utf-8'?>
<tomcat-users>
  <role rolename="tomcat"/>
  <role rolename="role1"/>
  <role rolename="manager"/>
  <role rolename="admin"/>
  <user username="tomcat" password="tomcat"
roles="tomcat"/>
  <user username="both" password="tomcat"
roles="tomcat,role1"/>
  <user username="role1" password="tomcat" roles="role1"/
>
  <user username="admin" password="secret"
roles="manager,admin"/>
</tomcat-users>
```

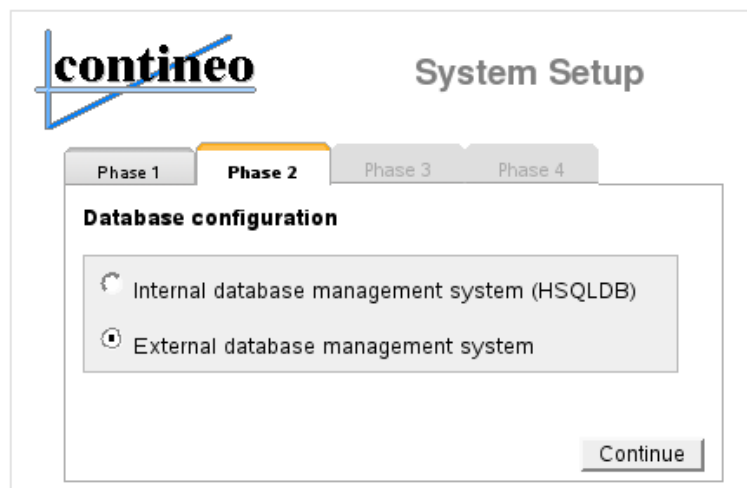
You might have to restart your server so that the new user account is activated. Now, navigate your browser to the setup wizard through the following URL: <http://localhost:8080/contineo/setup/>. At the beginning you have to select the setup language and accept Contineo's end user licence. The wizard is divided into 4 steps. In step 1 you have to specify the root of Contineo working directory. This directory will contain all document files and all logs and other resources needed by Contineo. The figure below shows the default value that takes the current user home directory. Make sure that the application server you are using has write access to the directories

and files!



The screenshot shows the 'contineo' logo with a blue checkmark and the title 'System Setup'. Below the title is a tabbed interface with four tabs: 'Phase 1', 'Phase 2', 'Phase 3', and 'Phase 4'. 'Phase 1' is selected and highlighted with an orange bar. The main content area is titled 'Working Directory' and contains a text input field with the value '/home/marco/contineo'. A 'Continue' button is located at the bottom right of the form.

In step 2 you have to configure the database management system you are going to use. You have to select if you want to use the internal database management system or an external one.



The screenshot shows the 'contineo' logo with a blue checkmark and the title 'System Setup'. Below the title is a tabbed interface with four tabs: 'Phase 1', 'Phase 2', 'Phase 3', and 'Phase 4'. 'Phase 2' is selected and highlighted with an orange bar. The main content area is titled 'Database configuration' and contains two radio button options: 'Internal database management system (HSQLDB)' and 'External database management system'. The 'Internal database management system (HSQLDB)' option is selected. A 'Continue' button is located at the bottom right of the form.

In step 3 you have to configure the database connection parameters. If you select the internal dbms, you have to specify the directory where the database should be stored. This is already everything required to set up the internal database system.

The screenshot shows the 'contineo' logo in the top left and 'System Setup' in the top right. Below these are four tabs: 'Phase 1', 'Phase 2', 'Phase 3' (which is highlighted with an orange bar), and 'Phase 4'. The 'Database configuration' section is active. It contains the instruction 'Choose the database type' followed by a list box with the following options: 'PostgreSQL 8.x' (selected), 'MySQL 4.1/5.0', 'Oracle 8i/9i/10i', 'Microsoft SQL Server 2000', and 'HSQLDB 1.8'. Below this is the instruction 'Specify the connection parameters' followed by four text input fields: 'Driver class:' with 'org.postgresql.Driver', 'URL:' with 'jdbc:postgresql://localhost:5432/contineo', 'User Name:' with 'contineo', and 'Password:' with 'contineo'. A 'Continue' button is located at the bottom right of the configuration area.

contineo System Setup

Phase 1 Phase 2 **Phase 3** Phase 4

Database configuration

Choose the database type

- PostgreSQL 8.x
- MySQL 4.1/5.0
- Oracle 8i/9i/10i
- Microsoft SQL Server 2000
- HSQLDB 1.8

Specify the connection parameters

Driver class: org.postgresql.Driver

URL: jdbc:postgresql://localhost:5432/contineo

User Name: contineo

Password: contineo

Continue

If you selected external database system as storage mechanism, you have to select the database management system to be used. Also, you have to specify the connection details in the provided textboxes. In the example below the PostgreSQL database management system was selected. This database contains a database called contineo and a user contineo was created on the PostgreSQL server to access this database. Please note that you have to create the database and the database user in advance using the administration tools provided by the database management system.

The screenshot shows the 'contineo' logo and 'System Setup' title. Below are four tabs: Phase 1, Phase 2, Phase 3 (selected), and Phase 4. The 'Database configuration' section asks to 'Choose the database type' and shows a list box with 'PostgreSQL 8.x' selected. Below this, it asks to 'Specify the connection parameters' with fields for 'Driver class' (org.postgresql.Driver), 'URL' (jdbc:postgresql://localhost:5432/contineo), 'User Name' (contineo), and 'Password' (contineo). A 'Continue' button is at the bottom right.

If you have successfully configured the database, Contineo will create all necessary tables and insert some basic data.

Step 4 is the final step. It just shows you the button to Contineo's entry page. By calling <http://localhost:8080/contineo/> this start page can be accessed.

The screenshot shows the 'contineo' logo and 'System Setup' title. Below are four tabs: Phase 1, Phase 2, Phase 3, and Phase 4 (selected). The 'Contineo was successfully installed.' message is displayed. It states: 'You can now login into the system as administrator with the following data: Username: admin Password: admin'. It also says 'Remember to change administrator credentials.' and has a 'Click here' button at the bottom.

You should now log in using the administrator account, create some user accounts, maybe set up the initial folder structure, configure access rights to the folders, etc. You should also log in as an ordinary user and do a short test drive so that you can see if everything works as expected. Try also to shutdown and restart your application and database server, so that you see if this is also working correctly. If everything is

fine, you should introduce Contineo to your users. Do not forget to give them at least a short introduction to the system, so that they do not have to figure everything out by themselves!

2.4 Some more Remarks

2.4.1 Slow Page Delivery

There have been reports that on first usage Contineo might feel a bit slow. It seems to take some time that requests get answered by the server. This is, however, just a first time effect. Internally, the application server has to compile the files send to the client on the first request. Later on, if you go to the same page again, it will load much faster. Therefore, it is a good idea that you play around a little bit with Contineo before you release it to your users.

2.4.2 Exception During Deployment

If you deploy Contineo on your servlet container, you will probably get several exceptions on Apache Tomcat's console. The exceptions will say that Tomcat was unable to open or create certain files needed for log4j. Do not worry about those exceptions. They will go away after you successfully configured Contineo. Before Contineo is configured, it will try to put its log files in a default path. Usually, Tomcat has no access privileges to write to this default path and therefore the exceptions are thrown.

2.4.3 Running Contineo 3 on Apache Tomcat 5.5

Starting with Contineo version 3, Contineo is meant to be deployed on Apache Tomcat version 6. However, it is also possible deploying Contineo 3 on Apache Tomcat version 5.5. In that case you have to first deploy the Contineo.war file as usual, but shutdown the server after deployment before running the setup. Now navigate to the deployed Contineo application, which can be found in *TOMCAT_HOME/webapps/contineo/* and go there into the directory *WEB-INF/lib*. Here, you have to rename the file *el-api-1.0.jar.tomcat5* into *el-api-1.0.jar*. After you have done this you have to restart the server and you can proceed with the setup procedure described in section 2.3 on page 2.

2.4.4 Memory Requirements

Since version 2.5 Contineo requires more memory to run, if you are using the internal SQL engine HSQLDB. You should change the settings of your server to allocate more memory. Otherwise you will get out of memory errors and Contineo won't work. For Apache Tomcat, you can change the *JAVA_OPTS* environment variable in the *catalina.sh/catalina.bat* file. Assigning 512 MB of memory seems to work:

```
for Linux:
JAVA_OPTS=" $JAVA_OPTS  -Xmx512M"

for Windows:
set  JAVA_OPTS=%JAVA_OPTS%  -Xmx512m
```

Make sure that you test your server to find a good value for your intended use. The memory requirement might differ according to how many users are accessing the server at the same time.

2.4.5 Cookies and Multiple Sessions

Each user wanting to use Contineo has to authenticate using his login and password. This session handling only works, if the browser accepts cookies. It is also not possible to log in to Contineo using different logins with the same browser at the same time like browsing to Contineo in different tabs of your browser. If you want to use different accounts at the same time, make sure to also use different browsers, because the session information is stored in the cookie and there is only one cookies for each browser.

2.4.6 Encryption

Passwords are send to Contineo in plain text. That is a security risk, if you are using Contineo in a hostile environment. Therefore, you should configure your application server to use SSL encrypted transfer (HTTPS) instead of general HTTP. This is not something specific to Contineo, however. You should also take this into account if you plan to use the web service interface. Here, it also makes sense to use HTTPS instead of HTTP.

3 Upgrade from a Previous Version

3.1 Backup First!

Before you upgrade an existing Contineo installation, take the time to create a complete backup. There are different things you have to take care of. Before you start, you must shutdown Contineo, so that no user can change any data anymore. In addition, you should shutdown also your servlet container, because some files are only written on server shutdown.

First, you have to backup your database. Unless you are using the file system based database HSQL DB, your database management system will provide some administration interface to do that. HSQL DB stores the database in a path you specified during setup. Look for the *context.properties* file in the *WEB-INF/classes* directory. You will find the path to the database in this file, just in case you do not know it anymore.

After you made a backup of the database, you should make a backup of all data files created by Contineo. That includes the users' directories, the search indexes as well as the documents (with all old versions) stored in Contineo. If you do not remember the path of the directories, start Contineo and log in as administrator. Now go to the settings menu and click on *Directories*. There you will find the directories you have to backup. Another way to find out the paths is again the *context.properties* file. The third thing you have to take care of are the settings of your installation. The settings are stored on the server in the *WEB-INF/classes* directory. You only have to backup the *context.properties* file.

Now that you have a complete backup of your data, you can go on upgrading to the new version.

3.2 Upgrade Procedure

Upgrading is easy. You just have to download the latest binary package, copy the files over the old installation, restore your settings and start Contineo again. Here is a step by step instruction:

1. Make a backup first! For instructions see section 3.1 on page 7.
2. Download the binary package of Contineo from Contineo's homepage and store it on your local hard disk.

3. Extract the file you downloaded. Inside, you will find a file called *contineo.war*. You must also extract this file. To do that you can use any tool able to extract ZIP files. Or you can use the *jar* tool provided with the Java distribution. In that case you have to use the following command: *jar xvf contineo.war*.
4. Stop Contineo and the servlet container, so that no user can access it anymore.
5. Delete all Contineo related files deployed in the servlet container.
6. Copy all files contained in the *war* file you extracted to the previous location in the servlet container.
7. Restore your setting file *context.properties* by copying it back from your backup to the *WEB-INF/classes* directory.
8. Follow the instructions in the following sections to change for example the database structure if needed. This step must only be done, if you upgrade to a complete new version. For example, if you upgrade from version 2.2 to 2.5 you have to follow the steps, but if you upgrade from 2.5 to 2.5.1, you do not have to do anything. Make sure that you follow those specific upgrade instructions step-by-step. For example, if you plan to upgrade from version 2.2 to version 3.0, first do the steps needed for upgrading from 2.2 to 2.5 and afterwards the steps needed for upgrading from 2.5 to 3.0.
9. Restart Contineo and test if everything works as expected.
10. If everything works fine, you can announce the upgrade to your users so that they can start using Contineo again.

3.3 Upgrade from 2.2 to 2.5

There were many technological changes during the development of Contineo 2.5. Therefore, some changes are needed while upgrading. It is of utmost importance that you first create a complete backup as outlined in section 3.1 on page 7! ! !

Till version 2.5, settings were stored in several files located in the *WEB-INF/classes* directory. Now, all settings are stored in a single file called *context.xml*. In general, you can adapt this file manually to migrate the settings, but we expect this to be error prone. Therefore, we suggest to run the setup procedure again on a blank database with no user and document files. After the setup, stop Contineo and replace the newly generated database with your old one. Do the same for the user and document directories.

Before you restart, one more change to the content of the database is needed. In table *co_menus* is a column *co_menuicon*. Entries look like */pages/images/home.gif*, but they should look like *home.gif*. You can either change this manually or execute the following simple SQL statement:

```
update co_menus
  set co_menuicon =
REPLACE(co_menuicon,'pages/images/', '')
  where co_menuicon like 'pages/images/%';
```


3.4 Upgrade from 2.5-2.6 to 3.0

During this evolution of Contineo various changes were made to the database, both in the structure of the tables and data contained in them.

For this reason and to simplify the migration was considered appropriate to achieve an upgrade kit.

This kit is a semi-automatic tool that can run on the 2.5-2.6 Contineo database a series of update operations.

You can find it in the Download/tools section of the Sourceforge project: Contineo 3.0 UpgradeKit

http://sourceforge.net/project/showfiles.php?group_id=88385&package_id=171332&release_id=589006

3.5 Upgrade from 3.0.0 to 3.0.1

Version 3.0.1 fixes a bug found in the previous version of Contineo 3.0.0 .

In practice a problem related to the backup settings has been resolved.

The Contineo 3.0.0 web interface does not save a relevant information so the next time you restart your Tomcat the backup is disabled.

Consequently a new property was added in *context.properties*:

```
conf.backupenabled=false
```

If you want to keep your old *context.properties* of Contineo 3.0.0 will be sufficient to add the line above.

4 Please contribute your knowledge

The installation instructions are generic, so they do not cover steps for any specific platform. Please let us know, if there are any specific steps needed for the platform of your choice. Please share your knowledge and experience, so that not other users have to reinvent the wheel!